Virginia Wildlife

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W. D. RODGERS JR.

Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

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IN THIS ISSUE **PAGE**

COVER: A flight of black ducks drops in to a quiet marsh under an autumn sunset. The black is Virginia's number one game duck. Our artist: William D. Rodgers, Jr., DeLand, Florida.

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EDITORIAL

Time of Change

IN the natural world around us, change is continuous. It is the most constant, most dependable factor in the environment in which we live. We usually take change for granted, or ignore it, unless it pops up and hits us right in the eye. And autumn is the kind of change that can hit you just that way, right in the eye.

Autumn is a riot of reds, yellows and golden browns, as the land lays aside its working garments of green and puts on its most festive raiment, washed in equinoctial rains and dried under Indian summer's gentle sun. The dogwoods which were clouds of white last spring become deep red, while poplars and hickories turn to gold, and a single sweet gum tree may blaze with every shade between the two.

In the earth's majestic sweep through its orbit the plane of its equator has passed through the position of the parent star, leaving the sun in the south, a beacon pointing the way for the wild goose and hordes of lesser migrant fowl that funnel down ancestral flyways. And the autumn breezes, pushing down over the land as sultry cyclonic air masses fall back upon their tropic bases, bear a cool, exhilarating fragrance born of the silent evergreen forests of the north.

Ever since a few people first began to be concerned about the preservation of the quality of our natural environment they have bemoaned the lack of public interest and support for their cause, and have prescribed "more conservation education" as the answer to the dilemma. Perhaps the main reason conservation education so far has failed to live up to its billing is that a great many people remain so lacking in awareness of the outdoor environment and its quality that they see it only as something to be used rather than something to be experienced and enjoyed. It is all well and good to preach the need for ecological understanding, but one does not have to understand the environment in all its complex interrelationships to enjoy it. The starting point of conservation education is at the level of simple enjoyment, wonder, and delight.

The Outdoor Writers Association of America has announced a new Youth Program in conservation education, and has prepared an instructional manual for its members entitled "Getting Through to Our Future Citizens." This project could be a real turning point in conservation education if it succeeds helping America's most influential outdoor writers in "getting through." We have not yet had an opportunity to review the manual, but we expect it will emphasize that conservation education begins not with ecology but with awareness and enjoyment of the outdoors. This goes for adults as well as youth. And there is no better time to begin enjoying and appreciating than when autumn's changes can hit you in the eye.

Hal Borland has written, "There may be other times as good as late October to go afoot and see the world, but there certainly isn't a better one." We agree, and can think of no better advice than "to walk with the scuffle of new-fallen leaves, to feel the mild sun and see the autumn sky, to have the company of busy squirrels in the woods and restless ducks on the river. . . . to sense the season at first hand."*—J. F. Mc.

*Hal Borland, *Sundial of the Seasons*, J. B. Lippincott Company, 1964.

LETTERS

Beach Needs Protection

AS you may know, last April the Bureau of Sport Fisheries and Wildlife announced its plan to eliminate from the beach of the Back Bay National Wildlife Refuge all nonessential vehicular traffic. There arose such an outcry from the pleasure seeking public, as well as from officials of the City of Virginia Beach and local businessmen, that the Department of the Interior held a public hearing. I attended the hearing which was conducted on May 17 in the Virginia Beach Civic Center. It was an experience that I shall always remember—and one which has affected me very deeply. The reasoning of those opposing the beach closure was, I believe, myoptic and motivated by economic and self-serving considerations. When I left the hearing room, my mind was in a state of emotional turmoil. I do not mean to infer that all persons in opposition to Interior's decision did not present valid arguments; but some of the positions taken were incredible to me, and those individuals who voiced their concern over the resultant ecological impairment to the refuge and its biological communities were subjected to catcalls and deprecatory glances. If the prevailing attitude in the Civic Center that night is representative of the national mood, then the future of wildlife conservation does not hold great promise.

As I predicted, the Department of the Interior knuckled under to public pressure and agreed to permit continued access to the refuge beach by motor vehicles. Such use has been considerably restricted however, and is subject to speed limitations and other regulations designed to minimize man's impact on the Back Bay Refuge.

Not only is Back Bay Refuge being subjected to increasing numbers of the recreating public, but real estate development extends to its very northern boundary and threatens it on the south. It is to be hoped that the projected False Cape State Park will soon become a reality and afford protection from further development to the south of the refuge.

I fully realize that the initial decision to close the refuge beach to public motor traffic was an extremely distasteful one, to say the least. If I were a dune-riding devotee, I would not have liked the decision either. Also present were well-intentioned persons whose families for years had used the ocean beach as a public right-of-way to shorten the distance between the Virginia Beach area and that to the south of the refuge. Of course, fishing, surfing, swimming and other beach oriented recreational pursuits were amply represented. And believe me, I do empathize with their dilemma. Though my primary avocational interests are camping and hiking, I am certainly one of them. Our vanishing wildlife—because of diminishing and degraded habitat—and urbanites who are witnessing the rapid disappearance of natural playgrounds near metropolitan centers are common victims of the same conditions: an expanding population, and a lack of foresight in urban and natural resource planning coupled with a failure to integrate the two.

Joseph C. Davis, Jr.
Norfolk

A Look at Even-aged Forestry

LOOK at any *managed* commercial forest land today and you will see blocks of even aged stands of trees which have been created by clearcutting the stands which formerly occupied these sites and encouraging immediate regeneration of each stand either by planting or natural reproduction. This is modern silviculture at work!

Even aged stand management is now practiced on both government owned and privately owned (including corporation owned) forest land. It is strongly advocated by foresters, whose job is to insure a sustained yield of wood and fiber to meet expanding demands for forest products, and is sometimes roundly condemned by people who find clearcutting esthetically objectionable and by hunters who find a clearcut hillside in place of the mixed forest stand where they bagged a trophy buck or called up a wild gobbler the season before. Professional game managers view clearcutting with somewhat mixed emotions. Whatever happened to the idea of sustained yield forestry through *selective* harvest?

The *theory* of selective cutting is attractive. All age classes of timber, from seedlings to mature trees, are maintained in each stand. Those trees which have matured since the last cut are periodically removed, along with excess trees of smaller diameter to provide space for the remaining trees to grow and new trees to become established. The fact that it is good theory but bad forestry did not become apparent while the main business of American forestry was harvesting virgin forests, but when it came to managing young second growth timber, selective cutting on a single tree basis resulted in poor reproduction of the most desirable species, stand deterioration as the best trees were removed and the poorer ones left to grow, and conversion of stands to the very shade-tolerant and slow growing varieties of trees. Only during the past twenty-five years has it come to be recognized by the profession generally that in our most desirable forest types selective cutting simply will not work over an extended period of time, and that at some point it becomes necessary to start over with whole new stands.

Small clearings have been used for many years as a management tool for improving large unbroken forests as wildlife habitat.

Commission photo by Kestloo

Wildlife managers know that the key to wildlife abundance is diversity in the habitat, and that the key to successful forest wildlife management is diversity in the forest. Uneven-aged, mixed second growth forests normally consist of aggregations of separate stands, and these stands reflect differences in topography and soil, and differences in the histories of their particular parts of the forest—storms, fires, logging operations, and cultivation of fields which have since been abandoned and either planted to trees or reclaimed naturally by the forest. These past events have all, at one time or another, set back the normal forest succession, and coupled with such factors as soil and topography and the passage of time they have determined the present composition and characteristics of the stands which comprise the forests. Uneven-aged forests often exhibit great diversity because the stands of which they are composed reflect various stages of plant succession, from openings to mature trees, interspersed in small patches throughout the forests. It is the prospect of losing this diversity in the forest, rather than the initial clearcutting, that causes the wildlife manager to shudder at the idea of an *even-aged forest*.

Actually, clearcuting on a limited scale is a forest game management tool that has been used for years, to increase diversity when existing timber stands fail to provide enough of it or when the forest is deficient in openings.

Clearcuts can create excellent quail and rabbit habitat, where almost none existed before, and an abundance of deer browse is produced on most clearcut areas almost immediately. But these benefits are temporary, and exist only until the trees in the newly created even-aged stands grow large enough to shade out and crowd out the other vegetation that was stimulated by the clearcut.

Clearcuts on a *small* scale within a forest area, and spread in time throughout the entire rotation cycle of the crop trees, actually has great appeal from the wildlife manager's point of view. Properly planned, they can enhance rather than destroy the desired diversity of the forest vegetation, and can go a long way toward stabilizing the wildlife carrying capacity of the forest as a whole. Since the new even-aged tree stands created by successive clearcuts will reach maturity and be ready for harvest in the same order and over the same time span as the original clearcuts were made, a pattern of diversification will be maintained indefinitely by normal harvests and regeneration of small stands. It is when excessively large even-aged stands, or whole even-aged forests are created by massive clearcutting that wildlife habitat is ruined and a pattern set that is likely to repeat itself. When all the crop trees in the block reach maturity at the same time, their harvest will result in another massive clearcut.

Whether a conflict actually exists between good forestry and good wildlife practices, where even-aged versus uneven-

The first effect of clearcutting is to increase food and cover for small game, and browse for deer. Later, when a new tree stand develops, an adjoining or nearby terrain compartment may be cut.

aged forest management is concerned, is largely determined by the size of the area that the forester chooses to clearcut and treat as a unit in the creation of an even-aged stand. An acceptable, or even desirable, clearcut from the wildlife point of view may vary a good deal in size, depending upon its shape and whether it is contiguous with another area that has recently received the clearcut treatment. Thus a long narrow clearcut, or one with an irregular outline, can cover a greater acreage without being detrimental to wildlife than a square block. Successive contiguous clearcuts, on the other hand, should be smaller than if they were separated by uncut compartments. Generally, wildlife managers tend to agree that most clearcuts under 50 acres in size are more likely to be beneficial than detrimental, and that under certain conditions of topography and configuration even larger even-aged stands are acceptable. Undoubtedly the most serious conflict between wildlife interests and the goal of maximum wood product yields occurs where past mismanagement has produced blocks of hundreds or thousands of acres of unproductive timber stands, all of which, from the commercial forester's point of view, need to be removed and regenerated as rapidly as possible in order to get commercial grade tree crops started again.

Nevertheless, most of the detrimental effects of even-aged management upon wildlife can be avoided if the will is there. As stressed by Sharon R. Miller, Director of Forest Management and Research for The Chesapeake Corporation of Virginia in a paper delivered before the Eleventh Annual Fontana Conservation Roundup last May, the secret is to view an entire area or management unit as the sustained-yield unit rather than any individual acre by itself. For instance, if the intent were to use 40 years as a rotation age, a major forest area could be subdivided into 40 compartments with the goal of eventually having 40 separate stands all of a different age class. Each year one stand, that had reached 40 years of age, would be completely harvested and regenerated. Furthermore, the age-class pattern could be mixed on the ground to provide diversity in ages between adjoining stands. The stands can be further enhanced as productive wildlife habitat by measures such as establishing gamefood strips, leaving of den trees, encouragement of mixtures of tree species on certain select sites (mixtures of hardwoods or deciduous trees on sites best suited to these species), leaving of strips or groups of residual trees along narrow drainages, etc.

Finally, there is the question of how much use can be made of these efforts to improve wildlife conditions through even-aged management. As examples of what is happening here in Virginia, over 11,000 hunters used the lands of Chesapeake Corporation during the past hunting season and Continental Can Company issued over 30,000 hunting permits to private individuals during the same season. Furthermore, hunting activity and interest on these lands has been increasing at a rapid rate. Chesapeake Corporation and others are actively engaged in supplemental wildlife management work on their lands, and wildlife considerations are being built into short-term and long-range forest management plans.

Thus it would seem possible to preserve wildlife and other values on forest lands managed for efficient timber production through a system of clearcuts and even-aged silviculture. Forty-acre to fifty-acre clearcuts probably would rarely cause serious wildlife habitat damage, and would often be beneficial. Larger clearcuts would be acceptable if they could be laid out in a long, narrow configuration and with irregular borders. Compromises will need to be made in establishing optimum sized clearcuts, in determining their shape, in deferring the cutting of strategically located stands of mast trees, in programming improvement cuts to increase browse and release fruit and mast bearing trees and shrubs in the midstory, and perhaps in providing for some permanent openings in the forest for diversification and supplemental wildlife food supplies.

Even with a system of even-aged silviculture a commercial forest *can* be more than just a sustained yield tree farm.

'70-'71 HUNTING REGULATIONS

A SPECIAL two-day pheasant hunting season on November 16 and 17 will be a new item on Virginia's hunters' fall menu this year, and its appearance is the most significant change in regulations since last year. Most of the other changes are local adjustments of antlerless deer shooting restrictions for some counties, designed to conform to the constantly changing status deer populations.

During the two-day pheasant season there will be a limit of one cock bird per hunter per day, and all birds shot must be taken to a game checking station just as is required for deer, turkeys, and bear. However, there is no special license required to shoot pheasants and no license tabs to be attached to the birds bagged. Female pheasants, readily distinguishable from the gaudy cocks by their brown coloration and smaller size, remain fully protected.

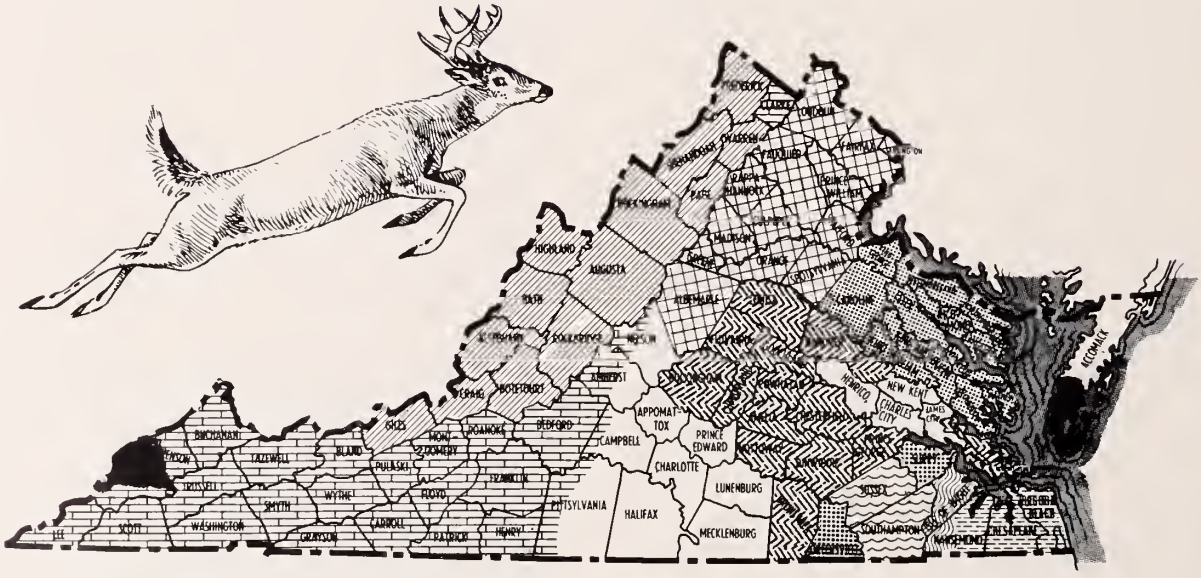
The special pheasant season comes after years of intensive effort to establish the birds through a program of stocking varieties whose native habitat matches as closely as possible that found in Virginia. Breeding populations have been established on the Eastern Shore, the Northern Neck, Lower Peninsula, Shenandoah Valley, and perhaps elsewhere although releases in a number of other areas are known to have resulted in failure. The special hunting season is considered to be experimental in nature, and it is hoped that the requirement to check all birds bagged will yield more information than is now available on the distribution and abundance of pheasants in Virginia.

Duck Season Earlier

The main changes in this year's waterfowl regulations are a somewhat earlier duck and coot season and more liberal bag limits on several species of ducks.

The basic limit on ducks is raised from 3 to 4, but the restriction within this limit to 1 canvasback or redhead, 2 wood ducks, and 2 black ducks remains in effect. In addition, however, hunters may take two "bonus" blue-winged teal during the first 8 days (seven shooting days) of the season, and may take two additional "bonus" scaup throughout the season if these birds are taken over the tidal waters of the Eastern Shore or the waters of Chesapeake Bay. The Bay area in which the extra scaup may be taken is bounded by the Chesapeake Bay Bridge-Tunnel, the Hampton Roads

Deer Seasons and Limits



November 16–January 5 – Two deer per license year, one of which may be antlerless on the last two days only.

November 16-28 – One deer* per license year, either sex on the last day only.

November 16-28 – One deer* per license year, bucks only.

November 16–January 5 – Two deer* per license year, bucks only.

CLOSED TO ALL DEER HUNTING'

November 16–January 5 – Two deer* per license year, one of which may be antlerless

November 16–January 5 – Two deer* per license year, one of which may be antlerless on the last 12 hunting days only.

November 10–January 5 – Two deer per license year, one of which may be antlerless on the last 12 hunting days only.*

October 1–November 30 – Two deer per license year, bucks only.*

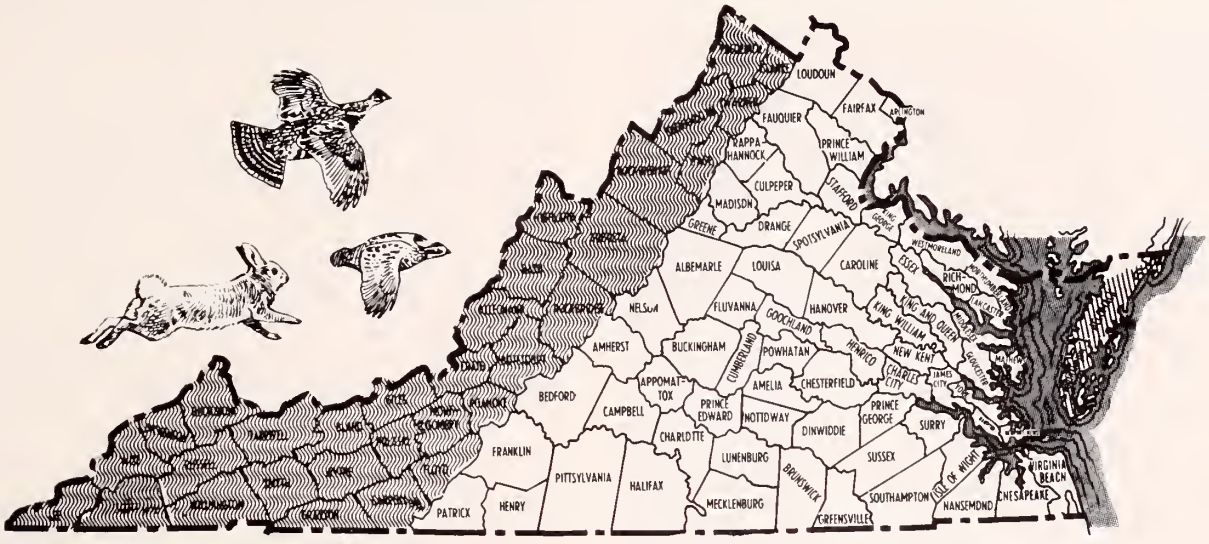
November 16–January 5 – One deer* per license year, either sex on last day only.

The bag limit on military areas may differ from that established for the surrounding county or counties.

* BUCKS WITH ANTLERS VISIBLE ABOVE THE HAIR EXCEPT AS OTHERWISE SPECIFIED

NO MORE THAN ONE DEER MAY BE TAKEN IN ANY ONE DAY

Rabbit, Grouse and Quail Seasons and Limits



November 2–January 30 (Rabbits & Quail); November 2–February 27 (Grouse)

November 16–January 30 (Rabbits & Grouse); November 16–February 15 (Quail)

November 16–January 15 (Rabbits); November 16–February 15 (Quail)

BAG LIMITS:
Rabbits: 6 per day; 75 per license year.
Grouse: 3 per day; 15 per license year.
Quail: 8 per day; 125 per license year.

Bridge-Tunnel, and the first highway bridge across the tributaries of the Bay north of the James River.

The earlier opening day on ducks will permit the duck season and longer goose season to open simultaneously this year. Duck hunters have noted in recent years that an earlier opening date for geese has tended to keep ducks away from marshes and water areas where geese are hunted, and thus has appeared to have an adverse effect on opening day success for duck hunters in some places. The earlier season also will make possible a greater utilization of teal and wood duck populations, and of other early migrants, such as widgeon, which tend to concentrate until the best of the natural food beds are cleaned up and then disperse or move on farther south.

As last year, there will be a shorter season on geese in the Back Bay area than in the rest of the state, and it will both open and close with the duck season. A one goose daily limit will be in effect in the Back Bay area, with a three a day limit elsewhere.

(Continued on page 14)

1970-71 VIRGINIA MIGRATORY GAME BIRD SEASONS AND LIMITS

Species	Season Dates	Daily Bag Limit	Possession Limit	Shooting Hours
DUCKS	Nov. 14-Jan. 2	4*	8†	½ hour before sunrise until sunset
GEESE & BRANT (Except Back Bay)	Nov. 14-Jan. 22	3 Canada Geese & 6 Brant	6 Canada Geese & 6 Brant	½ hour before sunrise until sunset
GEESE & BRANT Back Bay	Nov. 14-Jan. 2	1 Canada Goose & 6 Brant	2 Canada Geese & 6 Brant	½ hour before sunrise until sunset
COOT	Nov. 14-Jan 2	10	20	½ hour before sunrise until sunset
GALLINULES	Nov. 14-Jan 2	15	30	½ hour before sunrise until sunset
MERGANSERS	Nov. 14-Jan. 2	5 combined**	10 combined††	½ hour before sunrise until sunset
SCOTERS', EIDERS and OLD SQUAWS	Nov. 14-Jan. 2	7 combined	14 combined	½ hour before sunrise until sunset
CLAPPER RAILS and KING RAILS	Sept. 10-Nov. 18	15 combined	30 combined	½ hour before sunrise until sunset
SORA RAILS and VIRGINIA RAILS	Sept. 10-Nov. 18	25 combined	25 combined	½ hour before sunrise until sunset
DOVES	Sept. 5-Oct. 31 Dec. 21-Jan. 2	18	36	Noon until sunset
WOODCOCK	Nov. 16-Jan. 19	5	10	½ hour before sunrise until sunset
JACKSNIPE	Nov. 16-Jan. 19	8	16	½ hour before sunrise until sunset

*Not to include more than 2 wood ducks, one canvasback or redhead, or 2 black ducks
†Not to include more than 4 wood ducks, one canvasback or redhead or 4 black ducks
**Not to include more than 1 hooded merganser
††Not to include more than 2 hooded mergansers

SPORTSMEN AND THE MERCURY CRISIS

RAPIDLY increasing discoveries of dangerous mercury concentrations in fish throughout the country are putting a squeeze on fishermen similar to that experienced by many upland game hunters last fall.

Shotgunners' problems arose when pheasants and Hungarian partridges in Montana and the Canadian Province of Alberta ate and concentrated mercury used in fungicide treatment of various seed grains. The Montana Fish and Game Department cautioned hunters against eating the birds, but Alberta officials shut the pheasant and Hun season down tight.

Varying mercury residues in pheasants have since been reported in northern California and Michigan, and the Michigan Department of Natural Resources recently discovered mercury residues in lesser scaup (bluebills). Bureau of Sport Fisheries and Wildlife scientists now blame mercury poisoning for the deaths of two bald eagles found in Minnesota containing mercury concentrations of 130 and 117 parts per million.

Fishermen were thrown into the ring with mercury in mid-April of this year when a batch of walleye from Michigan's Lake St. Clair were found to contain dangerous mercury concentrations. Other areas soon got the word, and a little probing started turning up mercury-infested fish all over the country.

As a result, potentially dangerous mercury contamination has been found in fishing waters of at least 21 states: Alabama (Governor Albert Brewer has asked that its waters be declared a Federal disaster area), California, Delaware, Georgia, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Vermont, Virginia, Washington, West Virginia, and Wsconsin. Fish affected by the mercury include walleye, white bass, largemouth bass, smallmouth bass, striped bass, crappie, shad, bluegill, channel cat and carp.

Unlike the organic mercury used in agricultural fungicides, the waterborne variety is a result of industrial dumping in metallic form. Mercury is used in the manufacture of a variety of goods, but particularly by chlor-alkali plants which produce chlorine gas and caustic soda used extensively in paper pulp operations.

Some 75 of these plants scattered across the country, many located near major recreation areas, would have dumped an estimated 1.2 million pounds of mercury in 1970 alone if the threat had not been discovered and prompt action taken to reduce it.

For years everyone supposed the heavy metal just settled into the bottom and behaved itself. But fishermen throughout the country are now painfully aware that for years everyone was tragically wrong.

Swedish scientists have concluded inorganic, metallic mercury undergoes complex transformations after it's dumped into the water. Microorganisms actually use the mercury metal in food cycles and pass it on to fish. Minute concentrations of mercury salts have proven deadly to minnows, while other mercury compounds have killed brook, brown and rainbow trout fry.

A larger fish, such as an adult pike, can transform the inorganic mercury into organic methylmercury within two to four hours. The stuff eventually ends up in muscle tissue where cleaning and cooking cannot remove it. It's at this point the mercury crisis becomes a personal problem for the guy holding the fishing rod.

Three New Mexico children were permanently disabled by mercury poisoning after eating pork from a hog fed mercury treated grain. Mercury contaminated seafood has been blamed for scores of Japanese deaths and numerous cases of congenital brain damage in children.

At the very least, confusion has emerged as the most consistent by-product of the mercury crisis.

The World Health Organization has set 0.05 parts per million mercury as a tolerance level in all agricultural commodities, but have yet to establish safety guidelines for fish.

Photo by Bill Cochran, Roanoke

Is that bass going to be fit to eat? Potentially dangerous mercury contamination has been found in fishing waters of at least 21 states.

The Federal Food and Drug Administration has established 0.5 ppm as a temporary guideline for fish, recommending that fish at this level be eaten no more than once a week. Meanwhile, the Federal Water Quality Administration supports the .005 ppm mercury standard for drinking water held by the Public Health Service.

Or take the Michigan angler who still wants to fish in Lake St. Clair where it all began. On the Michigan side of the lake he can catch walleye, white bass and sheepshead, but has to throw them back. On the Canadian side he's allowed to keep them but can't eat them.

And so the life of the fisherman—like that of Montana and Alberta bird hunters—becomes a bit more complex, if not downright dangerous, and the costs to humanity of environmental pollution continue to soar.

What Is A Hunter?

By JOSEPH B. C. WHITE
Pittsburgh

THE wind was moaning through the hemlocks. I hunched into the remains of an old chestnut snag, continuing my vigil, hopefully for the appearance of at least one old turkey gobbler. Three days had gone by since I started this hunt. There was plenty of sign and my calls had been answered, yet every time something had spooked the birds before they got in range.

This old stump was a perfect spot. It was deep enough to shelter me from the wind and gave me a sweeping view of the rim of the hill and the shelf below.

At first the time ticked away pleasantly. The sounds of the city that had dinned in my ears for months were slowly being replaced by the sweep of the wind in the treetops, the rattle of dry leaves along the forest floor and the hammering of a downy woodpecker on the snag that was my shelter.

I looked down at the well-worn Fox 12 gauge that lay across my knees. It seemed the perfect gun for the day and the spot. Then I began wondering to myself, what am I doing here? Why am I hunting for a turkey on this cold mountain when I could get a bigger, fatter bird at any supermarket? My own answer was that I wanted to be there. Furthermore, hunting is a state of mind as much as it is a physical action. It can be a combination of experiences that helps keep one's mind on an even keel for the dead serious struggle to keep the family fed and cared for. There is a bigger reason, too. Man is part of nature, and although in recent centuries he spends a lot of time in unnatural environments, he is drawn to relive the experience of his ancestors. Nature draws him back.

What is a hunter? He's a complicated man enjoying a very simple experience of being on his own. Each may have his reason or explanation. If he has any real soul, just being in the forest is a basic source of enjoyment and, for some, peace of mind.

There is something eerie and stimulating about sitting among the stumps of ancient hemlock and pine, knowing that when those forest giants shaded these hills, Iroquois hunters may have stood here in moccasined feet, waiting for an ancestor of today's turkey.

Since the days when man was awakened by rays of sunlight slanting into his cave, man has been a hunter. Over the countless centuries he has sought food for himself and his family through the "chase." If by stealth, patient watching and skill he made his kill, his family was fed. If he failed, he and his family went hungry or resorted to less palatable roots and such lesser foods.

Less than three lifetimes ago, the hunter was still an important provider in the early decades of this nation. In the backwoods sections of early America, venison, bear and wild turkey provided important supplements to the basic diet of pork and cornbread.

In our times the role of the hunter is generally a sporting one. Although the meat provided by the hunt may provide succulent meat for his family, the compelling forces that drive him to the woods are far more complex than the search for food.

There is much to see and be aware of in the autumn forest: moss drapes boulders and old fallen logs with shades of green that virtually defy imitation. Here and there the hulk of a giant tree bears witness to the grandeur of the virgin forest that once stood here. The hunter sits among

(Continued on page 22)

Commission photo by Harrison

GROUSE MANAGEMENT STUDY YIELDS

Photo by Leonard Lee Rue III

By JOE L. COGGIN
Research Biologist

IT didn't seem much like research when Game Manager Emil Amelong was leading a big black horse straight up a steep mountainside in Giles County. The horse was loaded with approximately 200 pounds of Dybar, a product containing 25 percent Fenuron, to be used to kill trees to create openings for grouse research. Immediately following the horse came Supervising Biologist Harold Trumbo and myself. We were trying to locate the one-half acre plots that had been previously laid out that were to be treated with Dybar. Our position at the rear of the train was to serve as an added inspiration to a sullen horse that showed no inclination for the uphill grind. All this for the sake of research, you understand—but why?

It has been indicated by other researchers that small openings tend to attract grouse, and it is believed that the main benefit to grouse is the production of insects for grouse broods. Using this as a basis for reasoning, it seemed logical that the creation of small openings would result in the production of more harvestable grouse in a given area. At the time this study began the game management program in Southwest Virginia suggested ¼ to ½ acre openings spaced ¼ to ½ mile apart throughout the National Forest where it was feasible to establish them. Since there was so little evidence to establish the relationship between grouse and openings of this type, it was decided to study the relationship further. If a definite increase in grouse could be clearly shown to follow the creation of these chemical openings, our forest game management plans could be adjusted as the study might indicate, and as the budget permits.

THE STUDY:

Two fairly homogeneous areas were located contiguous with each other and each area contained approximately 250 acres. A cover map was then made of both areas from Forest Service photos and a very careful examination of the areas. The types of cover were then classified into seven different types for the purpose of the study. Three transect lines were laid off and marked in each of the two areas. This amounted to 1.6 miles of transect line in each area which was sampled each month.

The sampling was done by one observer walking on the marked line, and one person on each side at about 75 yards from the center line. The three observers walked parallel to each other until all six lines had been sampled, a total of 3.2 miles. Each grouse observed was recorded and plotted on the cover map at the time of the flush. A description of the

UNEXPECTED RESULTS

understory and overstory was also recorded for each flush.

Both areas, or compartments, were sampled for one year from July 1965 through June 1966 before any treatment was made. Compartment A was the area to be treated with Dybar and Compartment B was the control.

The plots were located, marked and treated in February 1966. We tried to space the ½ acre plots about equidistant from each other in Compartment B. The 22 one-half acre plots amount to above five percent of the total acreage of the treated compartment. The treatment to kill the overstory vegetation was done by placing the pellet form Dybar around the base of the trees at the rate of about twenty pounds per acre.

During the years 1966-1967 and 1967-68 the lines were not sampled during all months for two reasons: It took about a year and a half to get a good kill from the Dybar. Some re-treatment with an injection in some of the plots had to be done to get a complete kill on some species. 1967-68 was also known to be a year of very low grouse population.

All transect lines were sampled again from July 1968 through June 1969. This is the post-treatment year used to compare with the pre-treatment data. Actually only 10 months data from each year are used to make the comparison because it rained so hard in November 1965 that the lines could not be sampled and in February 1969 the snow was so heavy we couldn't even get to the study area. Therefore, these two months had to be omitted from both years' data.

RESULTS:

The data showed that the treatment of Compartment A with 22 one-half acre Dybar plots did not result in any appreciable change in the grouse population.

A clear preference was shown for the control area during both years. The birds remained and increased in the control area, Compartment B, in spite of the Dybar treatment in Compartment A. The data shows an increase of 67.7% in the number of flushes and 54.5% increase in the number of birds flushed between the pre-treatment and post-treatment period in the *control* area, but no increase in the flushes and only an insignificant change in number of birds in the treated compartment.

More insight into the behavior of the grouse on this study area may be seen in Table I, which shows the habitat types and relates the type to the number of grouse flushed. Notice that there were no grouse flushed in area where there was little or no ground cover. Where ground cover is listed, it is mostly laurel, blueberry and teaberry. The descriptions of the habitat types in Table I are really over-simplified for the sake of brevity.

TABLE I. HABITAT TYPE AND GROUSE FLUSHED

Habitat Type	*Description*	*No. Acres*	*% of Total Area*	*% of Total Flushes*
1	Oak-Pine (thin) 3" dia. avg. Thick understory	117.5	26.0%	68.8%
2	Oak 3" dia. avg.— Thin understory	64.8	14.4%	6.2%
3	Oak-Hickory 6-8" dia. avg.— Medium understory	164.1	36.4%	25.0%
4	Oak-Hickory 6-8" dia. avg.— Rhodendron cover	32.9	7.3%	0
5	Oak-Maple-Poplar 10" dia. avg.—Little or No ground cover	16.3	3.6%	0
6	Oak-Hickory 14"-24" dia. avg.—Little or No ground cover	24.6	5.4%	0
7	Old Chestnut Oak 4"-6" dia. avg.—Very sparse blueberry	31.3	6.9%	0
	Total:	451.5		

Almost two-thirds of the total number of flushes were in habitat type Number 1 and one-fourth were in Type 3. The differences between these two types are not very great. The principal difference is the size of the overstory stems and the understory is much thicker in Type 1. It appears that a thick understory with a thin overstory serves as the best grouse habitat. It was concluded that the Dybar clearings had no effect on the grouse population in the area.

The study isn't over. Now we plan to use the same area, since we already have so much data from there, to see if various sizes of clearcuts will effect the birds. But since the birds seem to be managing themselves quite well in the Compartment B control area, perhaps the most important thing we will get from these studies is a more precise knowledge and adequate description of what constitutes preferred grouse habitat in the area—*thin* oak-pine overstory, thick understory, and ground cover.

Grouse hunters, take note!

Entering preferred grouse cover—thin overstory, thick understory, and ground cover.

Commission photo by Cantner

Governor Demonstrates Fishing Prowess

By OZZIE WORLEY
Roanoke

THE pleasures of Virginia's "fee" trout fishing have been savored by Gov. Linwood Holton, and he came away a winner.

Although he did not catch his limit, he out-fished four other men.

The governor and his 10-year-old son, Woody, spent a brief vacation at Douthat State Park near Clifton Forge, and fishing was one of the main items on their agenda.

The lake at Douthat is one of two places in the state where anglers can pay $1 a day to fish for trout, which are stocked weekly. The other spot is Big Tumbling Creek in the Clinch Mountain Wildlife Management Area.

Holton and his son lost little time in giving the trout a whirl. On their very first night, they went fishing. They struck out.

For all the interest the trout showed in them, they may as well have had goose eggs on their hooks. They tried salmon eggs, spinners and other lures. Nothing worked.

But so far, so good. They kept a wary eye on the governor's boat, which was within hailing distance. He, the warden, and the trooper weren't catching anything, either.

Between the two boats was another, occupied by an elderly man in a wide-brimmed straw hat. He was catching trout—one after the other. Everybody eyed him enviously.

Suddenly there was action in the governor's boat. He was in the middle seat, and his rod was bucking like an unbroken horse. He reeled a flopping fish into the boat.

This abrupt change in his luck challenged the reporters to greater efforts. They moved their boat to another spot on the lake.

Governor Holton (center) beams as he shows off rainbow trout. His companions, Warden Don Miller (running boat) and State Trooper Tex Chapman didn't score. (Neither did the two reporters.)

Buoyed by reports that other fishermen were scoring, the governor tried his luck again the following afternoon. Game warden Don Miller was his mentor. The third man in the boat carrying the governor was Tex Chapman, a state trooper. The governor's son trailed along in another boat.

Two newspaper reporters, themselves accomplished anglers, shoved off in still another boat. The newsmen were at the park to cover Holton's visit, believed to be the first vacation a Virginia governor had ever spent at a state park.

Holton invited the reporters to join him in fishing.

The two men, both of whom knew the ropes about angling —or thought they did—had readily accepted the offer. Perhaps, one of them was heard to say, they could catch a rainbow for the governor's supper.

Their luck still was rotten.

After an hour had elapsed, and still they had no trout to their credit, they saw a boat approaching. It was the one bearing the governor, the warden, and the trooper.

As they drew up, Holton—using the lingo of any ordinary fisherman—asked: "Any luck?"

One of the newsmen spluttered, "Uh, er, ah . . . not yet," all the while trying to think of an acceptable excuse like the weather, the bait or something.

The governor proudly held up his stringer, bearing a nice rainbow trout, for them to admire.

The day's fishing trip ended soon thereafter.

The governor landed only that one trout, but it was one more than the two reporters, the warden or the trooper got.

VIRGINIA WILDLIFE ☆ ☆ ☆ ☆

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

SMALL STATE FORESTS CLOSED TO HUNTING. Two of the Division of Forestry's smaller State Forests will be closed to hunting this fall due to the impracticability of managing them for this purpose, reports State Forester George Dean. These are the Lesesne State Forest in Nelson County and the Paul State Forest in Rockingham County. The 230 acre Lesesne tract is dedicated to developing blight resistant strains of the American chestnut, and hunter use could easily damage many of the expensive research plants now growing there.

The Paul Forest, west of Harrisonburg, is used extensively for environmental studies by high school and college students. A portion of this area is being preserved in its natural state for use as a natural area in teaching and research.

The closed areas will be posted with Game Sanctuary signs similar to those used around the State Game Farm on the north end of the Cumberland State Forest. Other State Forests will remain open to holders of the special $1 forest stamp available from vendors near the various forests.

NOVEMBER 14 PICKED AS WATERFOWL OPENER. Virginia's duck and goose seasons will open simultaneously on November 14 but will have staggered closing dates. Of the 40, 50 and 60 day duck season options offered in the U. S. Fish and Wildlife Service framework, Virginia chose the 50 day season with a daily bag of 4 ducks extending through January 2, 1971. The choice of this season over the longer 60 day season was largely to keep the option of 2 black ducks in the daily bag instead of the one offered with the longer season. Other daily species limits include no more than two wood ducks and 1 canvasback or redhead. For the first time this year, duck hunters will be allowed two bonus blue-winged teal in the daily bag in addition to their daily limit of 4 other ducks during the first 8 days of the season. Those shooting in the Chesapeake Bay below the first highway bridges or in the tidal waters of the Eastern Shore will also be allowed two extra scaup in the daily bag during the entire season.

Goose hunters will be allowed 3 Canadas daily during the 70 day season which ends January 22, with the exception of Back Bay area where last year's restriction of 1 per day will still apply during their shorter 50 day goose season. A similar restriction governs the bag in adjacent North Carolina. Goose flocks wintering in this area are dwindling, and flyway biologists feel that heavy shooting would hasten this decline. Goose numbers in the flyway are still high, but most are not wintering this far south.

HIGHER FEES LEVIED FOR BACK BAY WATERFOWL HUNTS. A change in policy this year on Back Bay Waterfowl Management Areas will require hunters to pay a blind fee of $3 per head instead of the flat $3 fee levied in the past for each blind. With the addition of the Barbour's Hill area, hunters are offered a variety of hunting options.

On the Trojan area, hunters must furnish their own boat and decoys and pay the $3 per head fee for use of the blind. At Pocahontas, guides and decoys are furnished for a flat fee of $20 in addition to the $3 per hunter blind fee. The Barbour's Hill area, located on the east side of Back Bay at the north end of the new False Cape State Park, can be reached only by 4-wheel drive vehicle from Sandbridge. Decoys are furnished, but hunters must wade to place decoys and retrieve birds. Hunters must pay the $3 per person blind fee and furnish their own transportation to the blind.

Most blinds will accommodate a party of three persons except those at Barbour's Hill which only hold two. Persons hunting on Pocahontas will be required to pay the $20 guide fee upon arrival for the hunt. Most of the dates were filled following the drawing in October but a few openings are available on a first-come, first-served basis. Persons may check on openings or cancellations by calling 426-6320 in Virginia Beach.

1970-71 SEASONS AND LIMITS

(Continued from page 7)

Turkey

November 2—December 19 — One per day, two of either sex per license year.

November 16—December 19 — One bearded turkey per day, two per license year.

CLOSED TO FALL TURKEY HUNTING

SPRING GOBBLER SEASON — APRIL 17 — MAY 8

NO MORE THAN ONE TURKEY MAY BE TAKEN IN ANY ONE DAY!

Bear

November 9 – December 31

November 10–January 5

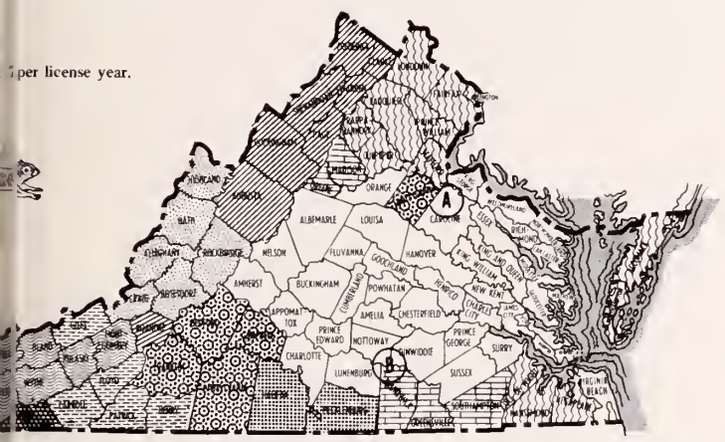
November 2–January 5

October 1–November 30

BAG LIMIT: one per license year (over 75 pounds live weight).

Squirrel

per license year.



nber 2—January 30 — September 15—October 14, November 16—January 30

ber 16—January 30 — November 16—January 30

Nember 16—January 30 — *September 15–October 14, November 16–January 1*

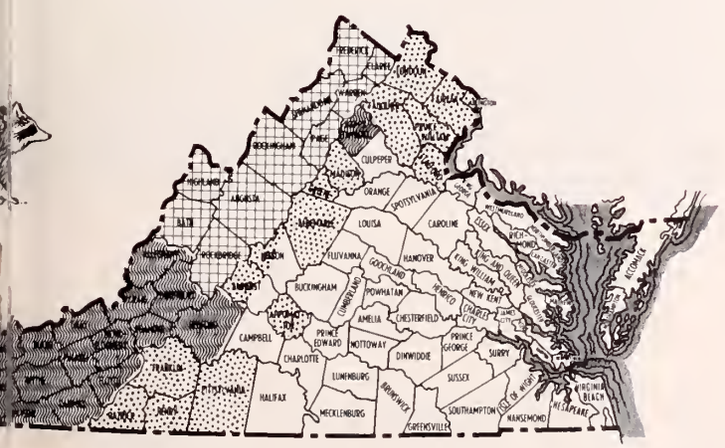
vember 2—January 30 — *September 15–30, November 16–January 1*

a:30 — September 15–30, November 16—January 30

e)5—October 31, November 17—January 30 — on Camp A. P. Hill Military Reservation only

1 January 30 — on Camp Pickett Military Reservation Only.

Raccoon



—January 31

—February 28

March 10

1—March 31

November 2—January 5 on National Forests and Game Commission lands West of the Blue Ridge.
November 16—January 31 on National Forests and Game Commission lands East of the Blue Ridge.

VIRGINIA BIG GAME KILL RECORDS

County or City	1967-1968 Deer	Bear	Turkey	1968-1969 Deer	Bear	Turkey	1969-1970 Deer	Bear	Turkey
Accomack	61			84			96		
Albemarle	245	19	32	392	18	13	417	14	24
Alleghany	626	27	61	705	32	176	801	8	280
Amelia	276		67	350		6	511		24
Amherst	241	22	44	141	7	10	185	8	26
Appomattox	123		23	195		8	264		15
Augusta	1,133	49	148	942	54	360	1,245	51	468
Bath	1,803	23	289	1,544	14	476	1,962	10	651
Bedford	75	14	6	74	11	6	103	13	5
Bland	117	7		190	8		224	10	
Botetourt	737	25	144	762	20	292	946	13	290
Brunswick	144		15	288		4	412		8
Buchanan									
Buckingham	549		86	658		34	756		55
Campbell	36		2	42		3	42		9
Caroline	784		37	1,032		11	1,256		25
Carroll	59		1	44			32		
Charles City	234			281			367		
Charlotte	40		21	45		9	73		11
Chesapeake-Norfolk	165	7		203	9		228	4	
Chesterfield	293		53	372		7	405		21
Clarke	86			106			103		
Craig	963	16	112	789	17	194	871	4	196
Culpeper	67		21	108		6	120		5
Cumberland	294		8	357		6	481		26
Dickenson	11			9			6		
Dinwiddie	291		39	360		3	434		19
Essex	88			121		4	169		
Fairfax	8		7	4		4	22		3
Fauquier	203		52	324		25	373		41
Floyd	23			24			31		
Fluvanna	470		14	988		10	925		15
Franklin	58			95			60		
Frederick	466		121	550		265	596	1	245
Giles	541	6	23	433	11	91	600	7	260
Gloucester	143			211			261		
Goochland	155		18	227		12	263		20
Grayson	406			212			296		
Greene	28	18		32	6		35	18	
Greensville	339			272			255		
Halifax	69		17	76		2	130		13
Hanover	94			118			123		
Henrico	52			73			110		
Henry	1			5			2		
Highland	725	7	132	672	10	260	897	14	408
Isle of Wight	356			303			322		
James City	156			229			234		
King & Queen	185		36	239		12	277		12
King George	249			333			398		
King William	299			371			372		4
Lancaster	532			312			293		
Lee	37			37			38		
Loudoun	94		13	148		2	247		17
Louisa	138		37	285		31	270		23
Lunenburg	86		17	90		3	132		7
Madison	22	11		32	14		25	13	
Mathews	40			71			57		
Mecklenburg	42		1	46			55		
Middlesex	62			75			78		
Montgomery	26		55	20		115	38		134
Nansemond	300			251	1		318	1	
Nelson	79	13	11	126	14	11	123	9	9
New Kent	220			293			348		
Newport News-Hampton	115			252			211		
Northampton									
Northumberland	457			344			337		
Nottoway	179		12	246		9	324		6
Orange	83		31	142		7	144		15
Page	207	6	20	206	18	27	285	9	52
Patrick	223			140			185	1	
Pittsylvania	63		12	72		8	106		13
Powhatan	183		34	303		8	423		21
Prince Edward	79		27	101		12	143		9
Prince George	293		16	354		1	392		6
Prince William	141		53	286		13	342		25
Pulaski	84	2		132			128		
Rappahannock	43	4		86	2		347	2	
Richmond	149			220			183		
Roanoke	9		20	18		51	19		57
Rockbridge	516	13	141	555	17	255	724	8	333
Rockingham	1,177	47	52	1,216	41	143	1,595	43	231
Russell	3			12			23		
Scott	53			52			70		
Shenandoah	768	1	91	707	4	252	877	2	307
Smyth	206	2		235	3		302	5	
Southampton	1,033			1,379			1,742		
Spotsylvania	138		47	208		12	266		17
Stafford	222		38	309		18	404		5
Surry	240			325			640		
Sussex	791			965			1,067		
Tazewell	40	4		56	4		76	9	
Va. Beach	21			24			27		
Warren	305	2	49	236	1	74	375	2	68
Washington	106	1		104	1		133		
Westmoreland	70			120			124		
Wise	13			11			20		
Wythe	209	3		279	5		307	4	
York	470			561			700		
TOTALS	24,934	349	2,406	28,027	342	3,361	34,154	283	4,534

Turkey harvest figures do not include spring kills.

LET YOUR TREE MAKE A PLEA

By CHARLOTTE HILTON GREEN
Raleigh, North Carolina

MANY ancient trees, including some historical ones, are in need of care. Perhaps to have fungus cut out, dead branches removed, and some hundreds of pounds of fertilizer distributed, at the right time of year.

Have you such an oak, or cypress, magnolia, live oak, tulip tree?

Is such a tree in your *region?* Perhaps hundreds of years old, still beautiful, still stately in appearance—a tree that has witnessed much of the history of your land? And yet—is slowly dying? People are disturbed, regretful. "*Why* can't something be done?" they ask. Someone gets an estimate. "Two hundred dollars," the tree surgeon's reply.

Granted, with all the work needed, that is not unreasonable. But, where will the funds come from? Various plans are suggested . . . none seems workable.

Such was the case with the handsome white oak, the the venerable Henry Clay Oak (estimated to be nearly 600 years old) of Raleigh, N. C.—near the Internal Revenue Service Building, a block from the Governor's Mansion that sits in the great square reserved when the city was planned.

Historically important, this tree. The marker beneath it states that sitting in its shade Henry Clay wrote his famous letter opposing the annexation of Texas—which many believe cost him the presidency in 1844, when he was defeated by James K. Polk.

In 1965 it was generally acknowledged the famous tree was in dire need. Since it was on private property, the city could do nothing. The owner, an elderly lady, was unable to. Various patriotic and historical organizations were approached, were interested, but had no available funds.

And so, in the name of the city's young TREE SOCIETY (deeply interested, but also without funds) a columnist whose "Out-of-Doors in Carolina" had been a Sunday feature in the Raleigh *News and Observer* for over thirty years, tackled the job. First, there was a personal appeal to an Antiquities Society then in session, which raised some fifty dollars.

Feeling if they understood it, many Carolinians proud of their heritage would like to contribute; in her column she told of the tree and suggested a "Dollar Shower." Would any interested send a dollar to the Treasurer of the TREE SOCIETY?

Wisely, she let the tree make its own plea. Here are some of the excerpts from it. (If you should try it, work out something of your own conditions and local history.)

"I am ancient . . . yet my memory is good. So much I have lived through of the history of this fair land you eall Carolina! So much happened in my youth . . . I must have been born back in the 14th century. Long before the white man came I was a gay, handsome young tree, showing off my glorious raiment, as I did when those first English colonists landed on our coast in 1585. And even before that! I was growing upright and strong when three ships sailing westward into unknown seas . . . its sailors growing wearied and frightened, finally turned their caravels southward . . . following the flights of birds. Birds that would surely guide them to land . . . land they so longed to see. If only they had sailed westward a bit longer, instead of turning southward, they would have landed on our coast!

"I was still taller and stronger when, in the early 16th

Henry Clay Oak. Under this tree Clay wrote his famous message against the annexation of Texas, which many believe led to his defeat by James K. Polk in his bid for the presidency.

Photo by Luther Partin, N. C. Wildlife Resources Commission

century, Spaniards under DeSota came up from Florida to seek gold in your Great Smokies. I'm glad they did not remain to establish colonies. Somehow I feel we are happier being an English-speaking country . . . and too, I feel a close brotherhood to the ancient oaks of Old England.

"Birds were nesting in my branches, the mockingbird singing his heart out on moonlit nights, when a little girl was born in 1587 on Roanoke Island. That was a sad period in my life. My leaves seemed to know and rustled a mournful litany . . . what, oh what, became of her? Did her people move . . . did they merge with the Indians . . . were they killed by the Indians? Somehow, I feel that did not happen, but their disappearance lingers as one of the mysteries of our land. Only that one word, *CROATAN*, carved on a tree.

"I liked the Red Men who sometimes rested in my shade. Little dark-skinned children climbed my trunk and branches. Yes, I liked my early peoples. They paid homage to me as to a Great Spirit.

"The years passed. I continued to grow larger and stronger. And then came great days for the country in which I had my being. On March 24, 1663. King Charles II granted the Carolina Charter, making it one of the seven states in possession of its own charter. I felt a wave of pride; my leaves rustled more bravely in the breezes. 'Carolina,' I seemed to hear them whisper; 'Carolina, you have the makings of a great land!' I lived to see not only the granting of great stretches along the coast, but to see a fine sturdy people—the common people who are the backbone of any land—push on westward: Moravians to the Salem country, the Scotch to Mecklenburg. Some of them, on their westward trek, stopped to rest, even to camp, in my shade.

"But heartache have I also witnessed, when state fought against state, sometimes even brother against brother, and the land was torn with strife.

"A black man hid among my branches, waiting until night came, with the North Star to guide him on his way to freedom. Other men, in blue and gray, rested beneath my shade. Once I witnessed a wounded one in gray sharing a drink of water and a bit of bread with a wounded one in blue—sharing it, I felt, in His Name. Some day, I thought, I shall live to see those old wounds healed.

"The years passed . . . and what changes they brought! Men learned to travel the highways of the skies . . . and that first flight, brief as it was, on our own shores.

"Today, many planes fly high above my crown. I try to stretch my tallest branch to wave them a greeting . . . but somehow, they do not seem to see me. Am I becoming too old . . . forgotten? Was that wave too feeble? Did it come from a branch that needed pruning; was weakened because it was also hungry . . . so weakened it could not get my message aloft through the blue?

"And yet . . . I have much life in me still. *I have the will to live.* All I need is a little attention, a little thoughtful care . . . a little love that surely my ancient years are due! There will be great changes in the next hundred years. Man will reach the moon . . . perhaps other planets . . . and how proudly I should record that.

"But—more than that, I should like to live long enough for mankind to learn to sing "Peace on earth—good will to men—to all men.'

"Will you help me attain that honorable age?"

The tree's plea was heard. The dollars came "showering" in . . . more than enough. And so the ancient oak shared the largesse of love and care that had been granted her. The columnist requested that any surplus funds be spent for flowering dogwoods to be planted on the grounds of the Women's Prison—more appropriately known as "The Institution for Correction." Today, in spring-time bloom they are a drift of white, symbolic of hope for the girls and women being rehabilitated there.

And somehow, I like to feel the spirit of the ancient oak, with a new lease on life. knows about it.

Are any of your ancient trees in like need? Then help them make a plea.

ATTITUDE:
Key to Peace With Mother Nature

By BILL WEEKES
Martinsville

"WE have met the enemy and he is us."

This statement by cartoonist Walt Kelly was printed in a news magazine earlier this year and mirrors succinctly the sudden awareness of Americans to a problem that will become the most monumental of the new decade and perhaps of the diminishing century—pollution's threat to civilization.

Almost as if the heralding of a new decade had been a cue, articles in newspapers, stories in magazines and speeches by politicians have proliferated concerning the danger of pollution to our lives. We as Americans may well be depicted as standing over the dying body of our nation incarnate, grasping a smoking gun in our collective hand and uttering, after a long bewildering minute: "What have I done?"

Americans are now concerned. Maybe many of us are a little scared—and with good cause. Insecticides and radioactivity are sneakily building up contamination of food products in the earth to even breast milk of mothers. Poisonous industrial gases, having invaded our atmosphere for 150 years, have reached such an accumulation and concentration in this country by now as to pose a clear and present danger to our health, yea our very survival. Acids, detergents and sewage have defiled and mocked the purity of our waterways, even raping our Great (no longer) Lakes of their fish and other beneficial aquatic life. Many of our rivers are now fingers of arterial filth.

Now, perhaps for the first time ever, Americans are collectively pondering the lessons to be found in natural history. We are discovering that we, as humans, have not only authored its many sad chapters, but have suddenly been given the choice to play out either of two roles in the remaining ecological drama—savior, or arch-villain (or should we say, village idiot) of America the beautiful. If we are not to be Ugly Americans in our own backyard, we will have to take seriously from now on the task of carefully overseeing our environment, lest we become forced to write mother nature's epitaph and our own.

What do we do? How do we begin to stem the tide of destruction, a devastation just as deadly as an H-bomb explosion, if more subtle and drawn out? How do we put the skids on pollution?

Like everything big that must change, it must first be approached through a change in attitude by the people involved. Within each individual there resides a viewpoint that first has to be re-directed. Perhaps, hopefully, this is being done with many individuals in our country now.

What attitude? Unyielding have we held for many centuries the view that humans are above the classification "animal." We gloated with comfort and self righteousness at the passage in Genesis that assigns us the task of multiplying and subduing the earth, of having dominion over fish and fowl and of "everything that moveth"—an assignment, incidentally, we would have undertaken without any godlike permission anyway.

We in our infinite and arrogant pride looked at ourselves as God's chosen species, and have thus looked upon the earth as ours to use carte blanche, its non-human species to dominate, conquer and destroy, no strings attached. Man is divine, we read. He has inhaled the spark of God's spirit. Animals are not divine, we concluded, and hence below moral consideration as creatures. Man is free to consume his environment as he sees fit, we have always thought. We have always claimed these rights of booming consumption under labels of "manifest destiny," "free enterprise," and "progress."

Indeed, in days when natural resources were plentiful, when man's history was in its city-less early chapters, such a laissez-faire attitude of man toward his environment was not a particularly dangerous one. Back in "those good old days" of pastoral life man COULD settle, consume and use up an area and then move away to another abundant area to start the consumption process all over again. Until the turn of this century, there was little thought given to preservation of wildlife, or conservation of resources. Until this century man could not conceive of suffocating himself ecologically.

Now in the 1970's we are finally facing a truth. Our numbers have swelled and our needs and habits of doing things have become so entrenched, we find we are indeed suffocating. The earth is not so boundless after all, we are shocked to find. The growing population and its needs have caused the cups of pollution to run over.

The population accumulation continues to build up. Right now there are 3.6 billion souls on this "global space ship," 227 million of them here in the U.S.A. In ten years there should be 4.4 billion people in the world and 260 million in America. In Virginia, the population is expected to double its present 5 million in 30 years and triple in 50 years. Right now, 3,000 acres a day in our country is being urbanized and while 70 percent of the U.S. population inhabits only ten percent of the land, by the turn of the 21st Century, 85 percent of the population will be urbanized. Where is the space and food coming from?

Now in the seventies we are confronted with another truth, an awesome truth. We don't like to admit it, but our growing numbers are endangering our own species just as threateningly as they are crowding out the eagle, osprey, kite, polar bear, wolf and 75 other non-human species. Much of the problem rests in man's numbers. But the real nitty-gritty threat grows out of the following question: Will these growing numbers become adults who will harbor an ecological point of view toward their own survival, or will their preservation be geared to EVERYTHING for the Almighty Dollar?

The more dollars, the greater guarantee of survival. This is the attitude of a sizeable chunk of the American populace, one must conclude. So we rush for money. This end justifies any means. Carelessness, indifference and ignorance to things natural are by-products to a populace preoccupied with financial acquisition. So we have oil slicks off California and Florida coasts killing off marine life and damaging sources of food. We frantically kill off insects with DDT and other insecticides in order to protect our crops or to eradicate weeds. In doing this we also kill off birds which would

have eaten grasshoppers that also forage off our crops. A farmer thinks he can frivolously gun down a hawk to get "a closer look at it." A landowner thoughtlessly shoots a fox because he "didn't know what it was." They each rob themselves of a good friend that can keep the mouse and rodent population down to reasonable and beneficial levels. Mice like our crops too.

Our lust for the Almighty Dollar may eliminate our 2,000 year old redwoods in California and keep the skies littered with garbage that block the sun's rays from coming to earth. We are told that we may eventually freeze ourselves into a new glacial age because of this blockage. We vomit more and more carbon dioxide into the air and we now realize we could warm up the world—by means of this increase of heat-containing CO_2—enough to melt our polar ice caps and cause world wide flooding from the sea inward.

Finally in the seventies we are beginning, after all these industrial decades, to come face-to-face with this fact: We are swiftly becoming our own predators. We ARE animal—though this need not erase our divineness. We ARE biological entities—though this need not dehumanize us. We DO exist in an environment on which we are dependent. We CAN become fatal victims (and we have in some instances) of contamination just like the oil-swathed bird. the bloated fish. We TOO are subject to the same biological needs as other living things. Where we were pre-occupied during the first decades of the Atomic Age with worrying about atomic fallout or attack from abroad. we suddenly see it is the enemy within—pollution, overpopulation and indifference—that could be the actual annihilators of life on earth.

And so, finally in the seventies we are discerning, to a more widening degree than ever before, that human beings ARE a part of a natural system—a web of life, ecologists call it. At last it is finally soaking through our thick craniums that how we treat our biological communities from now on will determine how much longer we will be able to keep life on this oval nugget suspended in "a dead and pitiless solar system."

It is mandatory we realize our tie to a natural system. that we are part of it and as such cannot intervene into it like some distant god safe from the consequences of his own intervention. We are involved because we are not gods, but of this earth and, therefore, what we do to our environment can either be suicidal or beneficial for ourselves as well as all species. We can't kid ourselves any longer, thinking we are removed from the web of life because we are secure behind strong walls, walk on nice carpets (hopefully not of bearskin) and immerse ourselves in comfy chairs or sofas watching our favorite TV shows. Our canned goods are neatly lined on the shelves of the pantry and our meats may be stacked in freezers. But no matter. These modern-day conveniences and sophisticated trappings come from SOMEWHERE. They come from the resources of the earth—be they animal, vegetable or mineral.

In the 1970's we are finally being hit right between the eyes with what one Phillip Keller reminded us; namely, that the world does not belong to us, we belong to it. Also, if we are ordained in Genesis to subdue the world. we are also told to REPLENISH it. We must not only take from the earth, but put back.

Only with this change of attitude, seen in the concept of reciprocity, can we become stewards of the earth here on earth. And more of us are going to have to become stewards pretty soon now.

DOVE-TAILING:

The Thing They're Doing

By BOBBYE FENTRESS
Virginia Beach

BY now, you F.W.H.s (fellow wives of hunters) have come in contact with either one of two kinds of feathers.

One is the kind that comes from tiny doves shot by big men. The other are generally described as "ruffled" feathers, worn by the big men who missed the tiny doves at which they shot.

(The authentic dove feathers cling to everything worn by the hunters, from camouflaged hat to big, old, dirty boots. They become obvious in every room, as soon as the vacuum has been put away.)

Like the rest of your fellow-sufferers, opening day probably began for you before the first cock crows. About the only occasion for some spouses arising without waiting for the alarm clock to go off is—the first day of dove season.

It gets many a would-be Dan'l Boone up before dawn. The mere fact that the shooting can't begin until noon has no bearing on their frantic preparations of the previous night that were resumed during the wee hours of that morning. In today's lingo, this is their "thing," and they simply have to do it!

There are shotgun shells to sort, dove callers to locate and "where in heck is my 'lucky' shirt?" (You remember, that old ragged-looking thing with frayed cuffs and collar and several rips in the sleeves and front? Naw, that couldn't have been the same one you gave the kids to wash the car with . . . could it?)

To the innocent, unexposed wife, a dove, is a dove, is a dove. Her mental picture of the foul (oops!) FOWL, is probably that of a small, white bird carrying a twig of an olive branch in its beak, and wearing a somewhat angelic half-smile (if birds can smile), the total conception adding up to one symbol—PEACE.

Dear ladies, let me rush to assure you that Nothing could be further from the truth! Whether their first day out spells success or defeat, the word is Trouble.

Should his trusty "smoke-pole" fail him ("doves too far away, other hunters 'spooked' birds, gunsight off-center"), don't worry about what you fix for dinner that night: he won't like it.

On the other hand, or wing, as the case may be, Lady Luck may have been perched on the barrel of his shotgun. And he may well come home loaded . . . with birds, that is. "Good," you say? Hah! This, Queens of the Cooking Range, is when the feathers really start to fly, or often-times, singe. It's strictly up to you.

After steeling yourself against the thought that these tiny birds remind you of your childhood "biddies," "Ethel and

Commission photo by Kesteloo

Lady Luck may have been perched on his gun barrel.

Albert," or your more recent acquaintance with the widely acclaimed character in the book, "Robert, the Quail," prepare to cook them.

A word of caution: Should you burn, undercook or simply ruin the whole mess of them—don't stand around making up excuses. Forget about packing, even. Just move out . . . fast!

But, wait a minute. If you haven't even tried your luck yet, don't chicken out. Live dangerously. Try a couple of good old Virginny recipes. Who knows! You, too, may discover that there's more to our feathered friends than meets the eye.

General cleaning instructions: (Play it cool, girls. Don't EVER learn this part of the operation!) Doves should be plucked, cleaned, and heads and lower legs removed. Some consider this too much trouble for so small a bird, and prefer to skin rather than pluck them.

Others just remove the breast and perhaps the legs. Many save the hearts and livers for use in the recipes. Soak the meat in cold water, to which a little vinegar has been added, for about two hours, or even overnight.

Wipe the birds dry and they are ready for the recipes that follow. Allow two doves per person, although hungry hunters can often eat more.

Since this first recipe is "just a little something I throw together," but is the preferred preparation of this household, we'll call it just plain FRIED DOVES.

After the above cleaning directions have been followed, salt and pepper birds thoroughly. Flour, then place in an iron frying pan half-filled with hot cooking oil. Brown both sides of birds until crispy looking.

Doves may then be served one of two ways: One, they may be put on paper towels to absorb excess grease and served like fried chicken.

The second method is to remove doves from cooking oil; drain most of the grease from the pan, leaving only enough to prepare gravy. This is accomplished by sprinkling about three tablespoons of flour (depending upon quantity of oil left in the pan) into the hot oil. Let this brown, adding salt and pepper to taste. Combine half milk and half water and add to ingredients (the amount, again, depends upon the consistency desired). Place doves in a large serving bowl and pour gravy over them.

From a hunter's paradise known as Back Bay in Virginia Beach, Virginia, comes the following recipe for dove-lovers:

ROAST DOVES

8 doves
8 slices onion (¼" thick)
4 cups seedless grapes
1 tsp. salt
½ tsp. pepper
¼ tsp. Monosodium Glutamate
1 cup butter (melted)
½ cup white wine
2 cups stock (chicken soup or bouillon)

Stuff a slice of onion into the neck opening of each bird. Stuff each bird with about ½ cup grapes. Fasten body cavities. Mix salt, pepper and Monosodium Glutamate with half the butter and roll the birds in the mixture. Place on a rack in an uncovered roaster. Pour the remaining butter, wine and stock over them. Roast uncovered in a moderate, 300 degree oven for 2 hours. Baste occasionally. Make a gravy with the drippings, if desired.

Strictly an outdoor chef, one Virginia Beach hunter says there's only one way to fix doves. Here it is:

GRILLED IN FOIL

10 to 12 doves
3 apples
10 to 12 slices bacon
Salt, pepper to taste

After cleaning, salt the inside of each bird. Core and quarter the apples, and put one segment in the cavity of each dove. Wrap a slice of bacon around each bird, fastening it with wood sliver or a toothpick. Wrap two doves to a package in aluminum foil and grill slowly over charcoal (or in an oven . . . if it rains) for an hour or so.

A dove soon to be on the way to the kitchen, a likely candidate for one of the treatments described above.

Commission photo by Kesteloo

ON THE LIGHTER SIDE

By TONY PHOENIX

IS FLY FISHING SAFE?

A FEW days ago I received in my mail a suggestion from a large boat manufacturer that I teach a youngster to use a fly rod. I wasn't singled out for this remarkable suggestion; the memo from the public relations department of the firm went to all outdoor writers across the country.

Once I got the drift of what they were suggesting I do, I hurriedly read on, fascinated with what I saw. I simply couldn't believe that anyone as smart as big companies are supposed to be could be proposing anything as crazy as this.

"One way to provide the kind of fishing excitement active kids want is to teach them to use a fly rod," the blurb begins. "The fun kids have with fish and fly rods will create a lifelong interest in angling," it continued.

I must have groaned out loud for darling wife cracked the door of the office and asked, "You all right?"

"No," I snapped. "I'm not all right. I was fine until just a couple of minutes ago when I learned of this . . . this foul move afoot to teach little kids to use fly rods. Little kids are supposed to use cane poles or cheap spinning outfits that won't cast." My voice had begun to tremble slightly and I was pointing—jabbing, actually—with one finger at the memo which lay on my desk.

She walked over, picked it up and began to read: "First, understand that fly fishing is not difficult." I saw her glance at me and I thought I saw the beginning of a smile. She started reading again, this time with more authority and enthusiasm than seemed necessary. "Anyone can learn to use a fly rod. The degree of skill depends only on the user's willingness to practice." No question about it now. She was getting a real charge out of this.

She tried to keep a straight face and tell me, "Why darling, I think it's a fine idea. You and the boy . . ." But that's as far as she got. I made a dive for a heavy book, one that looked as if it would contain 400 pages or more, when she let out a little shriek and whizzed through the door. My aim was off for I missed her completely and the book struck a mounted wood duck and knocked it off the wall. I could hear snickers outside the door.

But I was feeling a little better now. It had been a satisfying throw. I replaced the duck and picked up the book. It was a well-thumbed copy of Joe Brooks' *Complete Book of Fly Fishing*. I began to leaf through it until I came to page 39, the beginning of a tear-stained chapter entitled "Practical Casts."

My eyes skimmed across underlined passages in one of the world's best books on fly fishing by one of the world's best fly fishermen. I remembered the times I'd admired the photos of handsome, virile Joe Brooks fishing some faraway place—maybe a Colorado river in the early dawn. Another big tear plopped onto page 61 for the umpteenth time.

You see, I've tried to follow Joe Brooks' (and everyone else's) advice to the letter and I've failed. Try though I may, I've been unable to master the art of fly fishing. I've done everything the experts told me to do but it's no good. I've measured my fly rod and bought line and leader to match, using the tables that explain double taper, single taper, weight forward and weight backward. The last time I bought fly line I paid $15 for it—money saved to paint the front porch—so I could get exactly what the books said I should have. Then I looked at all the diagrams and pictures, studied the instructions, mentally saw myself casting with great

beauty and precision for trout on one of Virginia's mountain streams, and lit out for the hills.

The first false cast was pretty good. The second and third developed a wobble, so (getting a little worried now) I pulled back hard, too hard I guess, on the backcast. The whole works, instead of going high over my head and behind me as it should have done, came slithering between my legs while the eight-foot-long tapered leader—highly recommended by the experts—made two complete revolutions around my waist. I looked down at the bird's nest of line at my feet and made a mental note that $15 fly line certainly makes a much nicer looking mess when it's tangled than old cheap line.

Please, please don't misunderstand me. I'm not trying to discourage fly fishing. I'd gladly give my best spinning outfit and maybe throw in a bird dog to be able to learn how to fly fish safely. While others execute back casts, roll casts and line shooting with ease, I have considerable problems.

It must run in the family. While I can't ever recall seeing my father with a fly rod in his hands, another member of my family, a brother, had one of the most sobering experiences I've ever seen while trying to make a long distance cast. Admittedly, he was only learning. At least he thought he was learning. And, he was using a borrowed fly rod when it occurred. Somehow, though, I don't think borrowed equipment had much to do with it. Fly fishing and a certain amount of trouble just seem to go hand in hand in our family.

It happened one summer day a few years ago. My brother had been using the fly rod for about a half hour with some degree of success. As long as he kept his casts limited to 10 or 12 feet and didn't strain himself, he got along fine. But he soon became bored with this limitation on his newly developed ability. He began to work the line back and forth above his head in false casts, gradually feeding out more line until he soon had an impressive amount of distance betwen the front of his forward cast and the end of his backcast. I began to get uneasy, feeling that he was getting about as much distance as his experience and family background would allow.

But there was no stopping him. With his next cast, he fed out another yard or so of line. That did it. Something—probably an hereditary malfunction—went wrong. Just as he was ready to break all existing records for long distance casting with a fly rod, he made a final, heroic snap backward with the rod. The line—now extended the length of three trailer trucks—snapped back too, followed by the leader and the fly. He hooked himself squarely on the inside of the right nostril with a Muddler Minnow in full flight.

Since then we've both felt that there's a moral lying just below the surface of this experience, but we haven't been able to figure out what it is. I know one thing: my brother today is regarded as one of the most devoted users of the closed face spinning reel in the state of Virginia.

I've learned to accept what I can't change. Someone, somewhere may teach youngsters who still watch Captain Kangaroo to use a fly rod but it won't be me.

I have learned, however, to look at my shortcomings in an objective, even philosophical, manner. I've concluded that Shakespeare was wrong when he had Cassius tell Brutus: "The fault, dear Brutus (or was it brother?), is not in our stars but in ourselves."

It should be the other way around. The stars just *have* to be at fault.

Hunter (Continued from page 9)

charred stumps that speak grimly of ravaging fires that swept whole counties, altering for generations the original character of these mountain lands. Here and there the witch hazel bush displays the remains of its pale yellow blossoms; lichens lend endless patterns and shapes to tree and rock surfaces. All these are the background for the drama of the hunt.

Writers frequently mention the thrill of the hunt. It varies with the game involved, of course, but those who know the feeling can vouch for its effects.

Hope springs up with every crackling twig, every rustling branch. Sore and cold feet are immediately forgotten as the prospect of action becomes imminent. Then as the source of the noise is traced with cautious eye to a chipmunk or a wind-blown branch, cold soaks into the feet again and the hunter is newly aware that he is tired and hungry. Yet the same set of noises will bring him alert again and again.

One's eyes begin to "see" again in the woods. To the left are some squirrel cuttings. Under the hemlock a grouse walks haltingly, unaware that she is being watched, though suspicious and ready to thunder away at the slightest movement. Eyes strain to catch every movement, and after a while the antics of a grey squirrel 75 yards away suddenly become apparent. In the clearing below the shelf are two ragged apple trees, silent reminders of a farming effort that failed. Beneath them on the ground are the tracks of several deer. The claw marks of a black bear show how he climbed to gather the remainder of this year's crop of apples.

Now the farm land is being swallowed up by briars, fern and bracken, aspen, red maple and beech. Along the edge of the old orchard an abandoned logging road serves as a mute reminder of the rape of the great trees that once stood here. One can almost hear the lumberjacks' crosscut saw singing in the kerf, and the jingle of trace chains as teams snake the trimmed logs down the skid to the sawmill.

When the quitting hour comes, the hunter makes his way back down the mountain to camp. He bakes himself before a stove or open fire, and as the cold seeps out of his bones, he and friends tell stories of near successes in the hunt that seem to bring thrills equal to those recollections when the game bag was filled. After his supper the stories continue until each man drags himself to his bunk and falls into a solid, dreamless sleep.

The next morning the hunter rises in darkness, endures the cold bite of wind and rain that he has traded for his warm bed, but the misery is gone as he sees the sun top the mountain ridge, spreading wreaths of silver, gold and blue above the trees and turning the frost into diamonds.

With luck, his second day is crowned with success and in the mid-afternoon he calls a young turkey within range. Whether he has taken his game or not, he returns to camp to enjoy the companionship of other men who understand why they are here and share his love of this very personal experience. Each one comes down the mountain with more stories of how the wind or a creaking limb startled him, or how a deer wandered by almost within touching distance.

Each hunter brings his own viewpoint, anxious to tell his version of the day's hunt before the fire. And before he settles down for the night, the hunter will wander outside to watch the stars fill the dark sky, and he will be glad that he came again to this place with these men. He has laid up memories that will set him apart from all other men, yet bind him inseparably with all the generations of hunters who have gone before him.

Bird of the Month:

Green-winged Teal

By DR. J. J. MURRAY
Lexington

THE green-winged teal, like its relatives, the abundant mallard, the black duck, the blue-winged teal, and the cinnamon teal, and other common ducks, belongs to the genus *Anas*. It is rather interesting that while the common names of ducks have changed very little in the past fifty years, there have been many changes in the scientific names. Such changes mean very little to the ordinary bird student, though it is well to know them. They will probably be stabilized before many more years have passed, when the experts have finished digging up from the past the reasons for change.

The green-winged teal is a small duck, averaging a little smaller than its close relative, the blue-winged teal, although large green-wings may be larger than small blue-wings. Wild birds and other animals are not tied to the average, any more than people are. Because of small size of most of them, the variance is naturally smaller than with human beings.

The male European teal looks very much like the male green-winged teal, but instead of the white mark in front of the wing has a white stripe above the wing. The females of the two species are too much alike to be distinguished in the field. They may be separated by close examination in the hand.

It may again be suggested that a copy of "A Field Guide to the Birds" (second revised and enlarged edition) by Roger Tory Peterson should be secured by all serious bird students. It is sponsored by the National Audubon Society and published by Houghton Mifflin Company. It may be gotten direct from the publisher or from any good book store. Peterson has also published "A Field Guide to Western Birds"; "A Field Guide to the Birds of Texas"; and other books.

Olin Sewall Pettingill, Jr., has published two very useful books, "A Guide to Bird Finding East of the Mississippi," and "A Guide to Bird Finding West of the Mississippi." He has a chapter on "High Cheat of West Virginia," by Maurice Brooks; one covering our part of the country on "Great Smoky Mountains National Park," by Arthur Stupka; one on "The Great Dismal Swamp," by the present writer; and one on "The Everglades," by William B. Robertson, Jr. In fact, every large, important area in our country east of the Rockies is covered. These chapters go into detail about good places to find interesting birds. Second only to a good pair of field glasses is a good book on the area where you are working.

Edited by HARRY GILLAM

Blake Denney Named Game Warden of Year

Blake S. Denney, Virginia game warden area leader stationed in Clarke County, has been named "Virginia Game Warden of the Year" and attended the annual meeting of the Southeastern Association of Game and Fish Commissioners in Atlanta, Georgia, September 28-30, where he received a special award. Denney joined the Commission in 1954 and has been stationed in Clarke County since that time. He lives near Berryville.

Denney is active in all phases of law enforcement work, including education and public relations. He has worked actively in the local schools to promote the annual Wildlife Essay Contest. He has helped to train 554 students under the Game Commission-National Rifle Association hunter safety training program. In the course of his law enforcement work he has successfully broken up several deer poaching and commercial hunting rings. He always ranks among the top 25% of the game warden force in the number of cases made. He has rated high in the Game Commission's annual *Virginia Wildlife* Sales Contest among the warden force.

In 1963 he worked with the Clarke County Conservation Club helping them with the placement of a complete conservation section in the library of the Clarke County High School, to increase the interest and awareness of the students in the subject. Denney aided the group in obtaining a list of recommended titles. He was promoted from Game Warden to Area Leader of Clarke, Frederick, and Warren Counties November 1, 1966.

Also to go to the Southeastern Conference will be Game Warden Area Leader Joe Bellamy, stationed in Chesterfield County, who won the state Magazine Sales Contest by selling 2,500 subscriptions to the Game Commission's *Virginia Wildlife* magazine during the 1969-70 fiscal year. Bellamy has been runner-up in the magazine contest several times in recent years.

Game Commission Acts to Protect Duck Hawk

The Virginia Commission of Game and Inland Fisheries has decided to discontinue issuing falconry permits for catching and holding the rare and endangered peregrine falcon or duck hawk. The speedy bird, capable of dives up to 200 miles per hour, has been found throughout Virginia but is nowhere common. Its migrations carry it along the state's Eastern Shore in the fall where falconers trap the birds using live pigeons and nets.

Although highly prized by falconers, the duck hawk's rapid decline in numbers during recent years is attributed to pesticide poisoning rather than to the trapping efforts of the hawk enthusiasts. It was placed on the U. S. Fish and Wildlife Service's rare and endangered species list in 1968, and the Commission felt that since populations had reached such a low ebb, further inroads by hawk fanciers could hasten the extinction of the species. Persons already holding peregrines will be allowed to retain them since they might not survive if released after being conditioned for falconry. The Commission will continue to issue permits authorizing the use of other species of hawks and owls for falconry.

Virginia Cohos!

These two plump coho salmon were caught from Philpott Lake by H. V. Sluss, shown above, and his fishing partner W. E. Brown, both of Danville. One was 19½ inches long and weighed 3 pounds and the other was an inch shorter weighing 2 pounds 14 ounces. Quite a few others have been reported, some as large as 3½ pounds, indicating that Commission stocking efforts here and at Smith Mountain Lake have met with at least mild success so far.

Weston Wildlife Area Closed to Hunting

The Game Commission's Weston Wildlife Management Area in Fauquier County will not be open to public hunting this season due to restrictions that have been placed on its operation. The 325 acre tract was popular with northern Virginia dove hunters last season, but the shooting aroused the ire of local landowners and a court order was issued requiring such a large buffer "safety" zone around the property as to make it unmanageable.

90,324 Pounds of Seed Planted for Wildlife

A total of 90,324 pounds of seed grown on Game Commission Wildlife Management Areas was distributed during 1970 to private landowners for planting as part of the Game Commission's Farm Game Habitat Improvement program. Some 88,129 pounds of the total was the popular "game bird mix" which is attractive to most upland game species. Also 1,485 pounds of sericea and 710 pounds of bicolor lespedeza was planted under the program. A total of 12,571 private landowners cooperated by planting the materials or allowing sportsmen or youth groups to plant the materials on their lands.

The Commission began growing the seeds for the wildlife planting mixture on its Eastern Management Areas about two years ago. Part of the original planting is left on the management areas for food for local wildlife. The mix contains rape, soybeans, milo, Korean lespedeza, Japanese millet, proso millet, browntop millet, and foxtail millet. It has been found to attract quail, turkeys, doves, rabbits and deer. The bi-color and sericea lespedezas are brushy shrubs that provide cover as well as food.

The game bird mix and other seeds are distributed free to landowners requesting such materials in early spring. The seed is packaged in 3 pound plastic bags, each sufficient to plant about ⅛ acre, the acknowledged optimum size for this type of planting.

Edited by ANN PILCHER

Called His Bird

Fourteen - year old Eric Remole's spring gobbler lacked only one ounce of weighing 17 pounds. Eric called, then bagged the bird near Woodstock using a single-shot 20-gauge shotgun in this, his first, season of turkey hunting.

Planetarium Oceanography

This summer was a special time for learning at the Chatham Planetarium. Over 8,000 boys and girls viewed an unusual program on oceanography at the facility which is a part of an educational and cultural complex operated by the Pittsylvania County School Board. Funded under P.L. 89-10, Title I Federal Program, the Planetarium serves as a regional center for surrounding counties and cities. The innovative program was devolped at the suggestion of Mr. Maxwell Bryant, Director of Federal Programs, Pittsylvania County Schools, in order to provide learning experiences which would be highly motivating in broader areas of the science curriculum. Summer school students, remedial reading classes, as well as the general public flocked to the program which was presented free of charge several times each day. The 33 foot dome was transformed by the use of special projection effects into a view underneath Smith Mt. Lake, and viewers had the unique experience of being transported from the starry vistas of outer space to the bottom of the 200 foot deep lake. A 360° panorama depicted plant life and geologic structure of the lake as overhead many varieties of fish swam by.

The program, entitled "Astronauts and Aquanauts—Limnology at Smith Mt. Lake," relates man to the underwater environment. "Limnology" is oceanography without the salt. It is the study of freshwater bodies of water such as ponds, creeks, lakes, and rivers. The program discussed the food web, effects of pollution, and other problems of lake ecology.

Besides adding a new dimension to the facilities' use, J. H. Combs, Division Superintendent, believes the Planetarium's role as an environmental laboratory will help instill in the youth of our area a deep love and respect for the complex and delicate ecological balance of nature. "The young people who learn to understand and appreciate their total environment will develop a responsible attitude toward protecting and conserving our precious natural resources."

—JACK A. GROSS
Planetarium Supervisor

Pelt Presentation

Relaxed but intent on examining the beaver pelt exhibited by Game Commission Educational Field Services Coordinator Darrell Ferrell, these youths were some of the 160 young people from Stafford, Spotsylvania and King George counties attending Jamestown 4-H Camp in late July. County agents Richard Beck, Robert Cash and George Hall conducted the camp. A talk on wild animals' feeding habits and reptiles, plus a rattlesnake-copperhead-cottonmouth specimen exhibit, were included in Mr. Ferrell's presentation.

Pound Per Year

On June 20 3½ yr. old Rod Kegley of Pulaski hung and landed this 3½ lb. largemouth while trolling in Claytor Lake with a deep running Rebel plug.

Big Smallmouth

Using Crippled Killer lure on a 202 ZEBCO spin reel with 8 lb. test line, 8-year-old Chris Ayers, of Galax, pulled this 24 inch, 5 lb. 12 oz. smallmouth bass from the New River near his home on May 31.

Galax Gazette photo by Chambers

Smallmouth Turns Canoeist

When Joe Deadrick, Jr., of Harrisonburg, and his sons were with Scout Troop 42 on a 55 mile Shenandoah canoe trip, a smallmouth bass jumped into his canoe. The 5½ lb., 18" surprise arrival was captured, baked, but didn't provide seconds for supper.

Big Tree Search

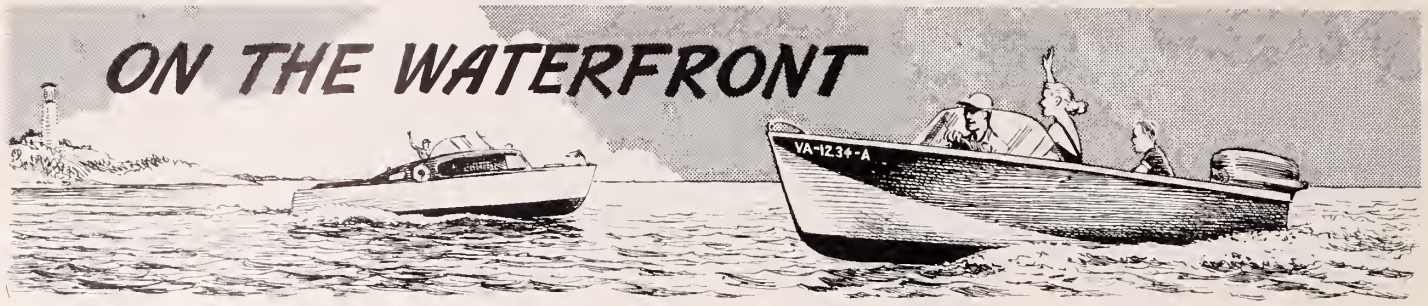
Virginia Forests, Inc., in cooperation with the Extension Service at VPI, is launching a new project known as Big Tree Search. First two years the project will be aimed at FFA and 4-H club members. Purpose will be to find and record Virginia's largest trees, by species.

All young people need do is obtain a nomination form from their 4-H club leader, or Vo-Ag instructor, fill it out and send it to Virginia Forests, Inc., 301 E. Franklin St. in Richmond. Some helpful sketches and directions for taking tree measurements are found on the nomination form.

Trees that make it into Virginia's Register of Big Trees will be considered for submission to the National Register in Washington, D. C., kept by the American Forestry Association. At present, Virginia lays claim to two of America's biggest trees: loblolly pine (Dinwiddie County, 16½ feet in circumference, 128 feet high) and osage orange (more than 300 years old at Red Hill Plantation near Brookneal where Patrick Henry spent his retirement years; 23 feet in circumference, 50 feet high).

Almost Citation Size

Mike Taylor of Emporia was fishing with his father in June when he took this 7½ lb. largemouth bass from Airfield Lake.



Edited by JIM KERRICK

Canoeist Responds

Dear Mr. Kerrick:

In the July issue my eye caught the title "Join the Canoe Boom" written by you. I had often wondered why your page in *Virginia Wildlife* never seemed to feature anything except outboard motorboats and I was pleased to see your reference to the canoe. As a long time canoeist, I have always been amazed that this craft is not more generally used. It certainly has many advantages, especially on rivers. I believe that the trouble has been in the past the wood and canvas canoes, such as the Old Town, were somewhat unstable and required a certain amount of experience to handle them, and because they were somewhat tippy they were the cause of unfortunate fatalities especially when the occupants of the canoes were non-swimmers and did not have on life preservers.

I believe that most of the new canoes, especially the aluminum, are much more stable. They have flat bottoms. Another advantage to the aluminum canoe is its lack of maintenance. The old wood and canvas canoes were expensive to buy and expensive to maintain. I have had two canoes, one 17 foot and another a 15 foot, and both of these have been subjected to a great deal of rough going in heavy rapids. They have been dented, bent, torn and they can always be easily straightened and patched. Under ordinary use they would be in absolutely perfect condition.

Another big advantage of the aluminum canoe is its light weight, around 70 pounds, which makes it very easy for one person to load it on top of a car and also makes it very easy to launch down all sorts of steep banks and especially makes it easy to get through shallow, rocky places in rivers.

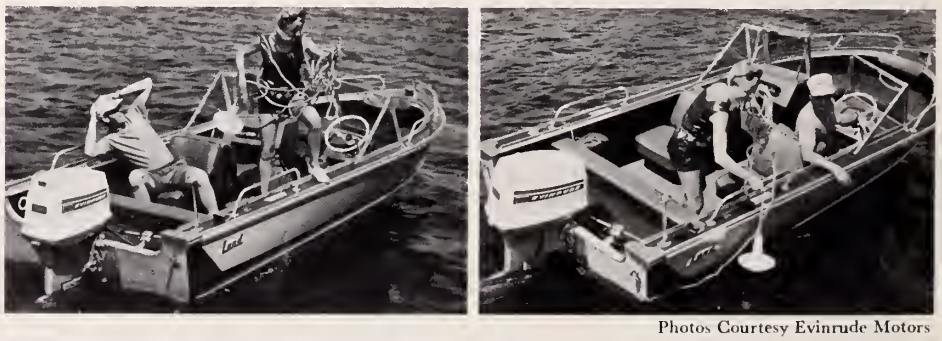
If one has to carry the boat around a bad spot in the river it can easily be done with a canoe, whereas with an aluminum car top boat the job would be much tougher.

Now I come to the real reason I am writing you this letter. In your fourth paragraph you state that, "If you're like most people a small outboard motor will be considered a necessity. Canoeing should be fun and not an endurance test." I know from experience that paddling a canoe is not hard work. With a minimum of effort one gets quite a lot of mileage from a canoe, and, anyway, isn't the opportunity of getting some exercise one of the reasons we seek recreation in the outdoors? Contrary to your statement, it is my belief that most people who canoe do not consider a motor a necessity. In fact, I have hardly ever seen anyone using a motor on a canoe. I think people should be discouraged from using motors on canoes. It is like riding an electric cart to play golf. It is like putting a motor on a sail plane or a worm on a trout fly.

—McKELDEN SMITH, M.D.
Staunton

Anchor Needed When Boating

Regardless of the size of the boat, an anchor is a handy piece of equipment to have aboard. There are several types of anchors available and each has its advantages and disadvantages.



Photos Courtesy Evinrude Motors

The type of anchor is important and keeping the anchor line coiled for free running is equally important.

Before choosing an anchor, or hook as it is sometimes called, consider the size of the boat and the kind of bottom you most often encounter. A marine dealer can offer recommendations.

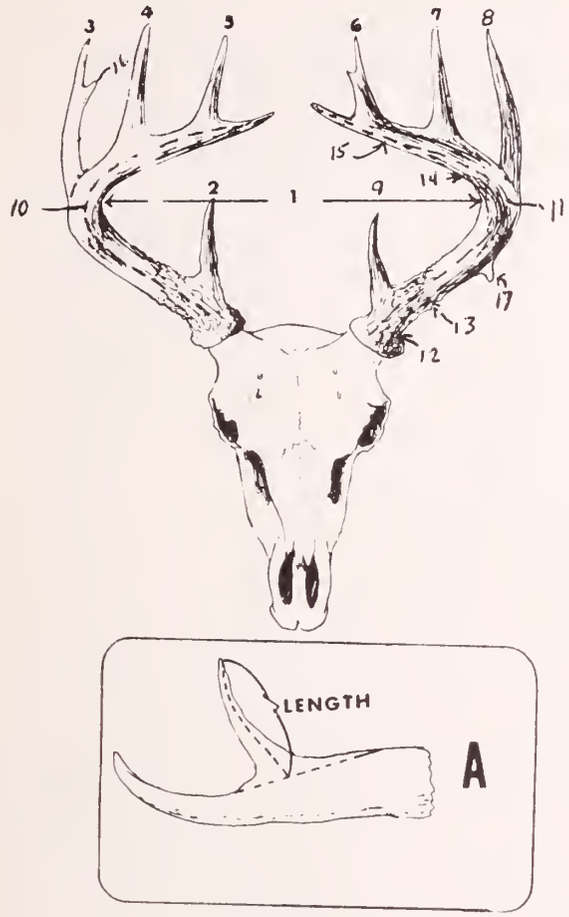
Two types of anchors are usually recommended, the mushroom and the Danforth anchor. The mushroom anchor is particularly suited for permanent mooring where there's a soft and/or mud bottom. The Danforth style is a good working anchor that settles quickly and has good holding powers, even on hard sand or rocky bottoms. A short stockless anchor might serve the purpose, or one of the many lightweight, patented hooks, some of which hold better than others in different kinds of bottom.

But no matter what type you have, be sure to have it made up with the line secured to it ready to use when you are cruising or making long runs.

Another consideration is the safe ratio of length of anchor line to depth of water. In moderate weather, this ratio is normally six-to-one. In other words, if you anchor in ten feet of water sixty feet of line is the proper scope, although if your boat is light and there is neither breeze nor current, half that would do for a short time. A six-to-one ratio, however, is better for overnight anchoring or if the boat is to be left unattended.

Here are a few good things to remember when anchoring: examine the anchor first and be sure that the line is attached properly and that the other end is secured to the boat; you don't have to play shotputter with the anchor, just lower it alongside the boat; you should have the anchor line coiled clear for running, with no kinks or knots in it; never stand on or in the coil when letting the anchor go unless you want to go with it.

How Does That Trophy Rate?



EACH year there are a number of impressive deer heads that are not entered in the State Trophy Contest because the persons who killed them feel they will surely be nosed out by a larger specimen. Consequently, one or more divisions are won by mediocre heads when larger racks are known to have been killed. In a true contest it is impossible to set up minimums for entry because average quality and number of entries varies markedly from year to year. The following procedure is recommended as a rough test for a prospective entry but is by no means intended to discourage entry of heads which do not measure up to these standards. All heads must be measured by an official measurer at the contest for final score.

To estimate the score of your head, add together (all measurements to nearest 1/8 inch) the spread of the main beams (1) plus the number of points plus the length of all points and random prongs (2-9, 16 and 17—See insert A) plus the length of both main beams (10 & 11) and the circumference of both antlers at the burr and between all points (12-15). After totaling all these measurements and counts, subtract half the length of all abnormal points (such as 16 & 17) and one-half the difference between corresponding length and circumference measurements on one antler and those on the other.

If the rack scores 225 or better, have it officially measured for Boone and Crockett competition. (Max M. Carpenter, Route 1, Dayton, Virginia, is official measurer.) If it has 9 or more points and scores 150 or over, or if it has 7-8 points and scores 100 or over, or if it has 6 or less points and scores 50 or over, it has a good chance of placing in the Game Commission's Big Game Trophy Contest.

The contest was started in 1941 and has been held annually since. Heads are first judged in regional competition at Harrisonburg or Newport News. The state contest is held in conjunction with one of the regional events alternating between eastern and western sites. Heads must be killed during the previous season to be eligible and the entrant must furnish the Big Game tag or an affidavit from the game warden certifying the entry as a legal kill.

State Big Game Trophy Contest

- There are no advance entry forms. Heads or antlers must be carried or shipped to the proper regional contest where they will be officially measured and entered. Bear skulls only need to be entered in state contest.
- *Prizes* for regional winners
- *Trophies* for first place State winners in each Division
- *plus Honorable Mention Certificates*

The east-west regional dividing line will follow the east-west deer season line in effect the year the entry was killed.

WESTERN REGIONAL CONTEST

October 22, 23, 24
Fairgrounds
Harrisonburg, Virginia
Deadline—Noon, Oct. 24

For entry details contact
Norvell Lapsley
Harrisonburg, Virginia
(Phone 434-6741) (B)
(Phone 289-5514) (R)

Sponsored by the
Harrisonburg-Rockingham
County Izaak Walton League

STATE CONTEST

October 24
Fairgrounds
Harrisonburg, Va.

Virginia
Commission of Game and
Inland Fisheries

Only animals first entered in regional competition are eligible

EASTERN REGIONAL CONTEST

October 17
Deer Park Elementary School
Route 17 and Jefferson Avenue
Newport News, Virginia
Deadline—5 P.M., Oct. 17

For entry details contact
E. N. Vandenbree
41 Sinton Road
Newport News, Virginia
(Phone 596-4105)

Sponsored by the
Peninsula Sportsmen's Assn.

$3,600 in prizes for you

24TH ANNUAL WILDLIFE ESSAY CONTEST

SEPT. 8, 1970 - JAN. 15, 1971

SUBJECT:

WILDLIFE'S FUTURE WITH THE EXPANDING HUMAN POPULATION

YOUR TEACHER TO
R YOUR SCHOOL NOW

S

tudents from all Virginia schools, grades 5-12 inclusive, re eligible.

ssays must be submitted through the schools participating. o be eligible, schools must submit an official entry card o receive materials.

ach essay submitted must indicate in the upper right hand corner: County, City, School, School Address, Principal, Grade, Name.

4. High school seniors competing for a scholarship must submit a completed scholarship form, obtainable from contest headquarters, attached to their essays.
5. Essays should not exceed 750 words.
6. Essays will be judged on the basis of originality, effort, grammar, expression and grasp of the subject. Final judging will be made by a panel of judges, representing the Commission of Game and Inland Fisheries, the Virginia Division of the Izaak Walton League of America, and the Virginia State Department of Education.
7. All essays must be sent prepaid or delivered to specified addresses and postmarked not later than January 15, 1971. For specific details see "Instruction Sheet to Teacher" found in the materials packet.
8. School awards will be made for 100 percent student participation.

PRIZES

1 High School Senior Conservation Scholarship $1000.00.
1 High School Senior Conservation Scholarship $400.00.
8 Grand Prize Awards, $50.00 each, one to each eligible grade.
8 Second Prizes, $25.00 each, one to each eligible grade.
24 Third Prizes, $15.00 each, three to each eligible grade.
24 Honorable Mention Prizes, $10.00 each, three to each eligible grade.
Special Mention Prizes, $5.00 each, divided among eligible grades in proportion to response.

School Awards.

The Scholarship Winners and the Eight Grand Prize Winners will come to Richmond as guests of honor of the sponsors and will have their awards presented to them by the Governor. Others will be given their awards in their schools.

Sponsored By
THE VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES
THE VIRGINIA DIVISION OF THE IZAAK WALTON LEAGUE OF AMERICA

Endorsed By
THE VIRGINIA RESOURCE-USE EDUCATION COUNCIL
THE RESOURCE-USE EDUCATION COMMITTEE OF THE VIRGINIA ACADEMY OF SCIENCE